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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/668,161	09/24/2003	Eiichi Sakaue	243128US2RD	2804

22850 7590 06/03/2008  
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C.  
1940 DUKE STREET  
ALEXANDRIA, VA 22314

EXAMINER
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RUTHKOSKY, MARK

ART UNIT	PAPER NUMBER
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1795

NOTIFICATION DATE	DELIVERY MODE
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06/03/2008

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com  
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<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/668,161	SAKAUE ET AL.	
	Examiner	Art Unit	
	Mark Ruthkosky	1795	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 18 March 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 2,3 and 5-23 is/are pending in the application.
- 4a) Of the above claim(s) 5-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2,3,22 and 23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |                                                                                      |                                                                   |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____                                                          | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/18/2008 has been entered.

### ***Claim Rejections - 35 USC § 102***

The rejection of claim 2 under 35 U.S.C. 102(e) as being anticipated by Kobayashi et al. (US 6,844,094) has been overcome by applicant's amendment to the claims.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-3 and 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al. (US 6,844,094.)

Kobayashi et al. (US 6,844,094) teaches a fuel cell system comprising a fuel cell having an anode, a cathode and an electrolyte film put there between; a fuel supply unit supplying fuel to the anode; and a gas supply unit having a pump, the pump giving negative pressure to the cathode so as to introduce gas containing oxidant to the cathode (see claims 1-12, col. 5, lines 30-end; col. 7, lines 1-30, col. 8, line 51.) The pump gives negative pressure to the fuel cell at both electrodes (see col. 6, lines 42-65.) Further, the pump may be supplied at the hydrogen gas supplying apparatus, (col. 13, lines 20-25.) An additional pump supplies positive pressure to the fuel supply unit (col. 6, line 66.)

The reference does not teach an exhaust flow path communicating with both the anode and the cathode and that the pump supplies positive pressure to the fuel supply unit. The reference teaches a second pump used to provide a positive pressure to the fuel supply by recirculating the hydrogen exhaust to the hydrogen supply (col. 6, line 28 to col. 7, line 30.) It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a single exhaust flow path communicating with both the anode and the cathode such that the pump taught in Kobayashi creates a negative pressure on the fuel supply system as taught in the air supply circuit of Kobayashi et al. (US 6,844,094.) The pump will also provide a negative pressure to the fuel supply in a manner similar to the oxidant supply as taught in the reference. Although the reference teaches recycling hydrogen to improve the performance of the fuel cell, one skilled in the art would recognize from the teachings of Kobayashi that the pump may be used for the fuel if the fuel exhaust is exhausted from the fuel cell without recycling. The reference shows that a pump creates a negative pressure for pulling a reactant through the fuel cell reaction path. The artesian would have found the claimed invention to be obvious in light of

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the teachings of the references. Thus, using one pump to provide both functions described in Kobayashi would be obvious to the skilled artisan based on the teachings of the reference.

### ***Response to Arguments***

Applicant's arguments filed 10/18/2007 with regard to the amended claims have been fully considered but they are not persuasive. A new rejection is noted under 35 U.S.C. 103(a). The arguments with respect to the previous rejection under 35 U.S.C. 102 are moot in view of the amendment and subsequent rejection noted.

As noted in the rejection, it would have been obvious to employ a single pump to provide a negative pressure to the oxidant and fuel supply passages, as taught in Kobayashi. The prior art recognizes that a pressure is supplied to the anode fuel supply in the fuel cell anode using a pump. Thus, using one pump to provide reactant flow as described in Kobayashi would be obvious to the skilled artisan based on the teachings of the reference.

### ***Examiner Correspondence***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Ruthkosky whose telephone number is 571-272-1291. The examiner can normally be reached on FLEX schedule (generally, Monday-Thursday from 9:00-6:30.) If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached at 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free.)

/Mark Ruthkosky/

Primary Examiner, Art Unit 1795